

Patent Claims

1. Method for capping an electric lamp which has a lamp cap (2) provided with a thermoplastic synthetic cap part (21), at least one lamp vessel (1) and at least one illuminating means arranged in the at least one lamp vessel (1), the at least one lamp vessel (1) being sealed in the synthetic cap part (21) during the method, characterized in that the following method steps are carried out for the purpose of sealing the at least one lamp vessel (1) in the synthetic cap part (21):
- the synthetic cap part (21) is fitted with at least one holder (210) for fastening the at least one lamp vessel (1) in the synthetic cap part (21), the dimensions of which holder are smaller than the corresponding external dimensions of a section (101, 102), to be fastened in the at least one holder (210), of the at least one lamp vessel (1),
  - at least the section or sections (101, 102) of the at least one lamp vessel (1) is/are heated to a point which is at least as high as the softening point of the thermoplastic synthetic cap part material and less than the melting point of the lamp vessel material,
  - the heated section or sections (101, 102) of the at least one lamp vessel (1) is/are inserted into the at least one holder (210), the synthetic material of the synthetic cap part (21) being softened in the region of the at least one holder (210) by contact with the heated section or sections (101, 102) of the at least one lamp vessel (1), and being displaced by the at least one lamp vessel (1), and
  - the softened synthetic material is allowed to set.

2. Method according to Claim 1, characterized in that the section or sections (101, 102) of the at least one lamp vessel (1) is/are heated to a point which is at least as high as the melting point of the thermoplastic synthetic cap part material.
3. Method according to Claim 1, characterized in that before the heated section or sections (101, 102) or the at least one lamp vessel (1) is/are inserted into the at least one holder (210), the synthetic cap part (21) is preheated to a point which is above room temperature and below the softening point of the synthetic cap part material.
4. Method according to Claim 1, characterized in that the softened synthetic material is cooled to allow it to set.
5. Method according to Claim 4, characterized in that the cooling is performed by means of an air flow.
6. Method according to Claim 1, characterized in that the displaced and solidified synthetic material forms a collar (212) in the form of a ring around the at least one lamp vessel (1).
7. Method according to Claim 1, characterized in that the at least one lamp vessel (1) is provided with at least one indentation (103, 104), and the heated section or sections (101, 102) of the at least one lamp vessel (1) is/are inserted into the at least one holder (210) in such a way that at least one indentation (103, 104) is enclosed in the synthetic material after the softened synthetic material has been allowed to set.
8. Method according to Claim 1, characterized in that

- the at least one lamp vessel (1) comprises at least one U-shaped tube (10), and the section or sections is/are the limbs (101, 102) of the at least one U-shaped tube (10),
  - 5     - the at least one holder (210) is formed as a depression or cutout in the synthetic cap part (21), and
  - 10     - the diameter of the depression or of the cutout (210) is smaller than the outside diameter of the limbs (101, 102) of the at least one U-shaped tube (10).
9. Method according to Claim 1, characterized in that the synthetic cap part (21) is formed as a cap of a pot-type lamp cap (2).
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10. Use of the method in accordance with one or more of the preceding claims for the purpose of capping a fluorescent lamp.
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11. Fluorescent lamp having a lamp cap (2), and a discharge vessel (1) which has at least one U-shaped glass tube (10), a permanent connection existing between the discharge vessel (1) and the lamp cap (2), characterized in that the lamp cap (2) has at least one thermoplastic synthetic cap part (21) and the permanent connection is a fused bond between the thermoplastic synthetic cap part (21) and the limbs (101, 102) of the at least one U-shaped glass tube (10).
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12. Fluorescent lamp according to Claim 11, characterized in that the thermoplastic synthetic cap part (21) is designed as a cap through which the limbs (101, 102) of the at least one U-shaped glass tube (10) are led, and which has collars (212) which are ring-shaped on the inside and surround the limbs (101, 102) of the at least one U-shaped glass tube (10) in a self-closed fashion.
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